

REMARKS

Applicant notes the Examiner’s entry of the previous amendment. Applicant also notes the Examiner’s objection to the wording of claim 24. That wording has been amended in accordance with the Examiner’s suggestion. Claims 17, 19, and 24 have been amended in this response. New claim 25 has been added. Claims 17-25 are before the Examiner for reconsideration.

In the most recent Office Action, the Examiner rejected claims 17-24 under 35 USC §103 as unpatentable over Gelbart (US 6063546) in view of Bratt et al. (US 4229520). The Examiner asserted that Gelbart taught essentially all of the steps of the claimed process except for exposing the photopolymer from the bottom side of the plate. However, the Examiner asserted that Bratt et al. taught a method of forming a relief pattern in which exposure could be “either from the top surface or the bottom surface (column 2 lines, 60-67 and column 10, line 66-column 11, line 16).” The Examiner concluded that it would have been obvious to one skilled in the art “to modify the method of Gelbart by exposing from the bottom surface in order to form the relief because doing so is an art-recognized suitable method for forming the relief.”

Applicant questions whether Gelbart indeed teaches all of the other recited process steps and further questions whether the reference teachings can be combined in the manner proposed by the Examiner. As described in applicant’s specification, one conventional prior art method of forming a flexographic printing plate was to expose a photopolymer to curing radiation from the bottom side to form a cured relief base (typically termed “floor”) followed by a second exposure of radiation from the opposite (top) side of the photopolymer to form the printing relief areas. See, paragraph [0003]. Further, as is also conventional, the relief base or floor does not form an area which is inked for imaging during flexographic printing.

Gelbart, on the other hand, exposes his photopolymer plate through a mask that includes opaque areas (120B), transparent areas (120A), and partially transparent areas (120C). The exposure is from the top side of the plate. The photopolymer beneath the opaque areas remains unexposed and presumably is completely washed away during final processing of the plate. The other areas of the photopolymer which are exposed through the transparent and partially transparent portions of the mask form first and second *image* areas (see, claim 1, which recites “first” and “second” areas “of the image”).

Thus, with respect to the process recited in claim 17, Gelbart’s process does not expose the photopolymer to radiation from the bottom side and does not form a base relief thickness or floor. Rather, Gelbart forms two different image areas using a top side exposure through a variably transparent mask. Gelbart’s process does not appear to be capable of forming a relief base area because of the (1) direction from which the radiation impinges on the photopolymer, and (2) use of opaque areas in the mask.

Similarly, with respect to independent claim 21, Gelbart teaches away from the use of halftones to control the amount of radiation reaching the photopolymer. See, column 1, where the prior art use of halftone films is criticized. Further, as with claim 17, Gelbart’s process does not expose the photopolymer to radiation from the bottom side and does not form a base relief thickness or floor.

Likewise, newly-added claim 25 recites a process which exposes the photopolymer from the bottom side only for a time sufficient to cause the photopolymer to polymerize and simultaneously form a base relief thickness and a printing relief thickness in the layer. Gelbart does not teach or suggest such a process.

Applicant also questions the Examiner’s conclusion that Bratt et al. teach/suggest radiation exposure from either side of a photopolymer plate. The undersigned has reviewed the passages in columns 2 and 10-11 referenced by the Examiner in his Action and cannot find any such teaching. Bratt et al. also appear to radiate only from the top side. When Bratt et al. mention at column 11 exposure to radiation “preferably through the transparent cover sheet,” the reference is teaching a top side exposure. The alternative discussed by Bratt et al. is *not* exposure from the bottom side, but rather the use of an overcoat layer instead of a transparent cover, with exposure again taking place from the top side. See, column 11, lines 25-29.

Further, even if Gelbart were to be modified as proposed by the Examiner, such modification would, in applicant’s view, render Gelbart inoperable for its intended purpose of creating two image areas. First, either or both elastomer layer 14 and backing layer 16 of Gelbart would either have to be eliminated or be constructed from radiation transparent materials. Mask 120 and UV light source 22 would need to be re-positioned beneath photopolymer layer 12. Then, bottom side exposure of photopolymer layer 12 would need somehow to create the two image areas desired by Gelbart even though the radiation exposure

was from a completely different direction. There is nothing to indicate that reversing the direction of radiation through Gelbart's photopolymer layer 12 would accomplish his intended result.

Accordingly, one would not expose the bottom surface of Gelbart's plate to radiation through his mask because that would not produce the effect desired by Gelbart. Further, Bratt et al. do not teach or suggest exposure from the bottom surface so that there is no teaching in either of the references relied on by the Examiner to do so. Applicant submits that the claims as amended are patentable.

For all of the above reasons, applicants submit that claims 17-25, as amended, are patentable over the cited and applied prior art and are in compliance with §112. Early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
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